FOREIGN DOCUMENT

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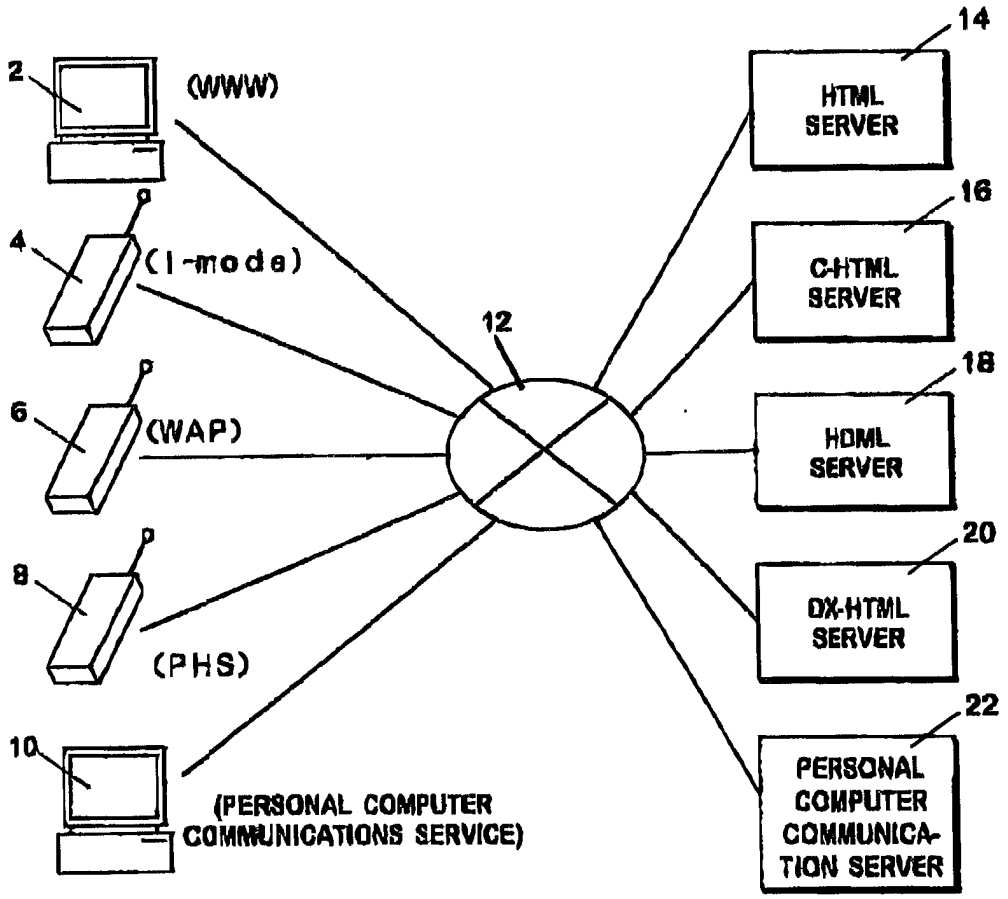
FIG.1

PRIOR ART



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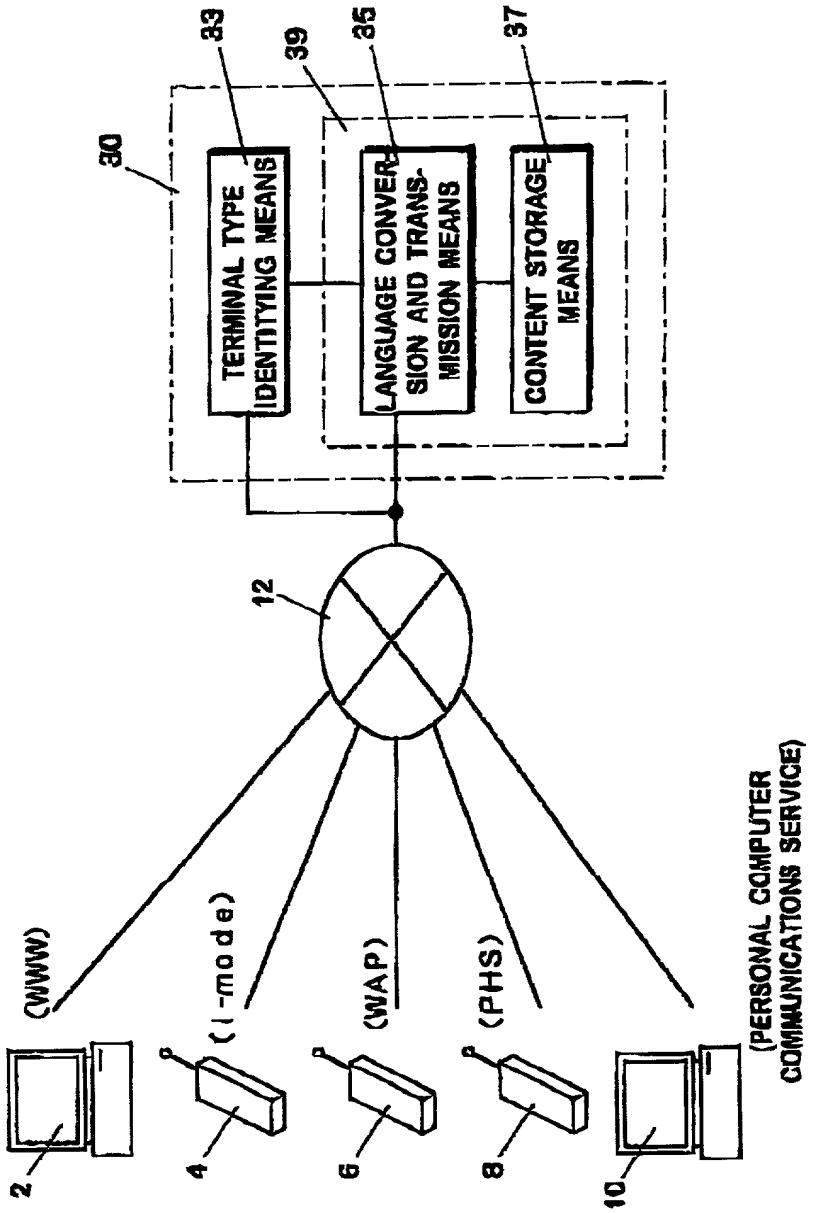
30
33
39
35
37
TERMINAL TYPE IDENTITYING MEANS
LANGUAGE CONVERSION AND TRANSMISSION MEANS
CONTENT STORAGE MEANS
12
(WWW)
(i-mode)
(WAP)
(PHS)
(PERSONAL COMPUTER COMMUNICATIONS SERVICE)
2
4
6
8
10

FIG.2a

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01-03-30 10:52 RUBUTANI PATENT OFFICE SUAW-SWITZMAN

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FIG.2b

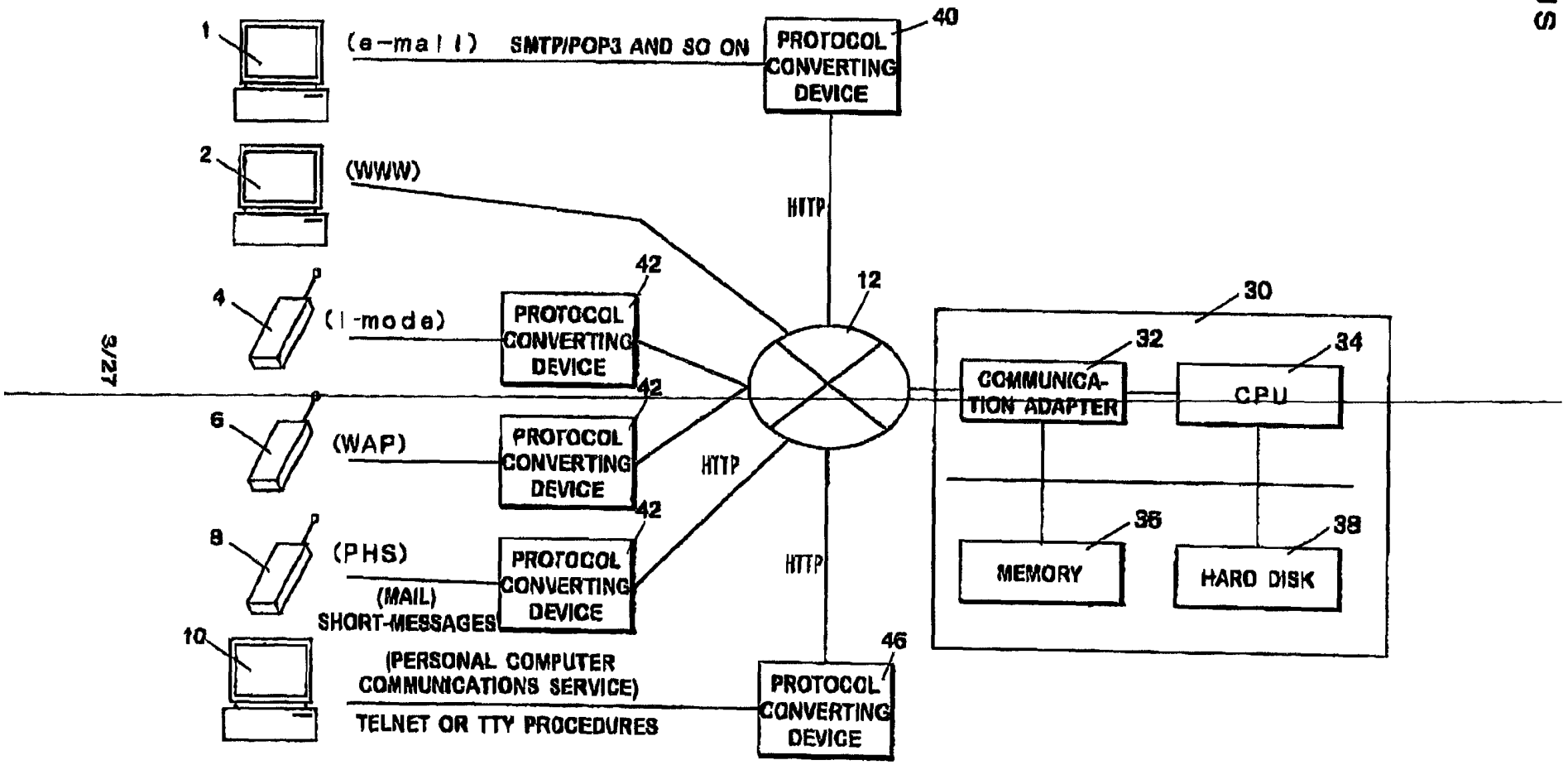

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FIG.3

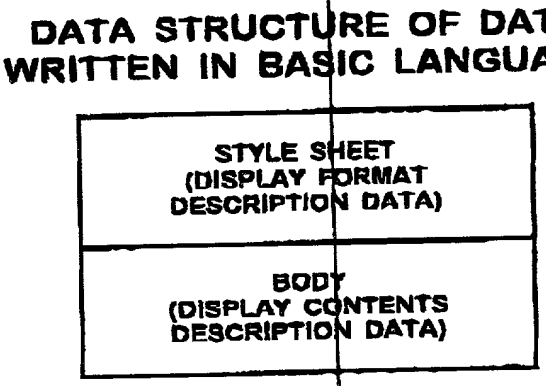
DATA STRUCTURE OF DATA WRITTEN IN BASIC LANGUAGE
STYLE SHEET (DISPLAY FORMAT DESCRIPTION DATA)
BODY (DISPLAY CONTENTS DESCRIPTION DATA)

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FIG.4

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<TAG NAME ATTRIBUTE NAME=ATTRIBUTE VALUE ATTRIBUTE NAME=ATTRIBUTE VALUE...>

FIG.5

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FIG.6

BODY

```
<KSP KEY=K1 NAME="KSP SAMPLE">
<P KEY=R1> SELECT THE MENU</P>
<IMG KEY=R2 SRC=ICOM.JPG>
<A KEY=R3 HREF=MAIL.KSP> E-MAIL</A>
<A KEY=R4 HREF=BBS.KSP> BBS</A>
</KSP>
```

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STYLE SHEET

```
<HTML>
<HEAD><TITLE>$K1.NAME$</TITLE></HEAD>
<BODY BACKGROUND=bg.gif>
$R1$<BR>
<IMG SRC=$R2.SRC$>
<A HREF=$R3.HREF$>$R3</A>
<A HREF=$R4.HREF$>$R4</A>
</BODY>
</HTML>
```

FIG.7

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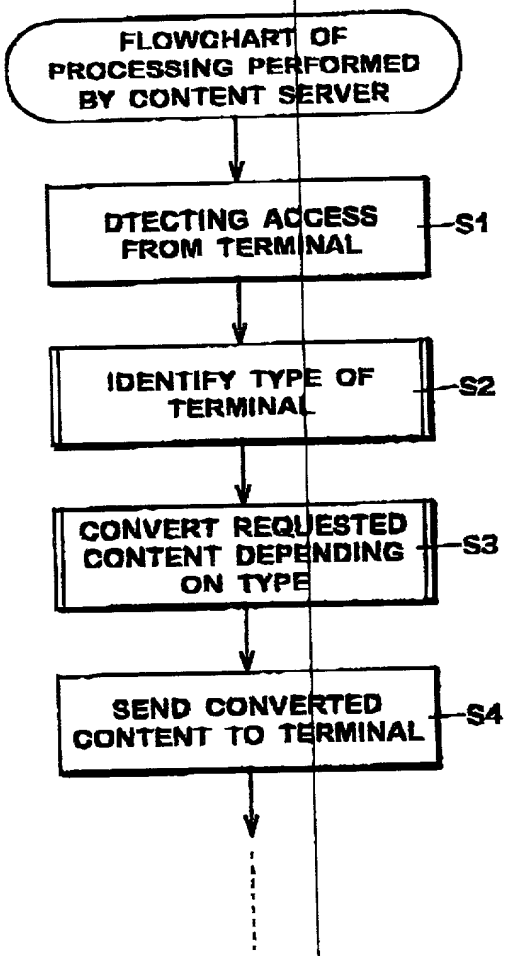
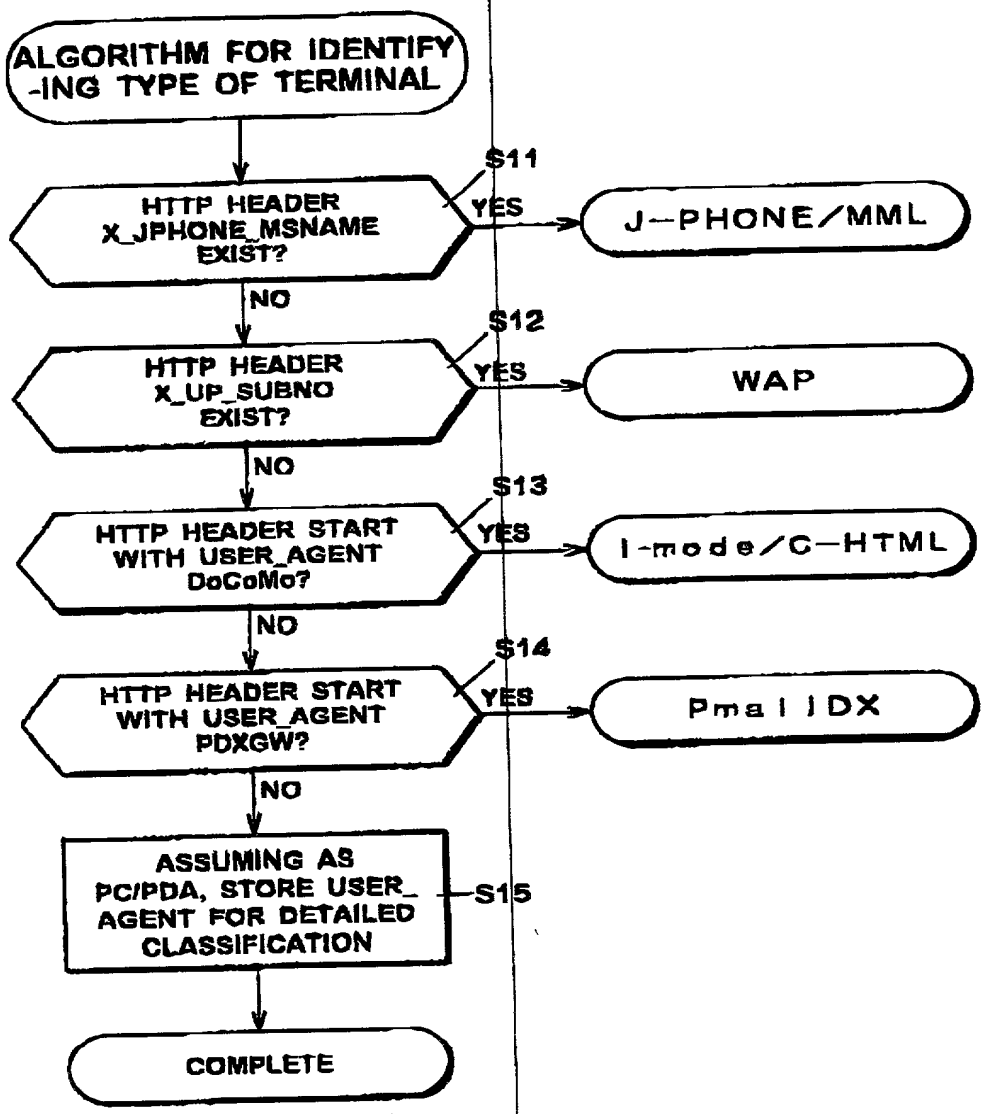
FIG.8


FLOWCHART OF PROCESSING PERFORMED BY CONTENT SERVER
DTECTING ACCESS FROM TERMINAL
S1
IDENTIFY TYPE OF TERMINAL
S2
CONVERT REQUESTED CONTENT DEPENDING ON TYPE
S3
SEND CONVERTED CONTENT TO TERMINAL
S4

118US

FIG.9


ALGORITHM FOR IDENTIFY -ING TYPE OF TERMINAL
HTTP HEADER X_JPHONE_MSNAME EXIST?
S11
YES
J-PHONE/MML
NO
HTTP HEADER X_UP_SUBNO EXIST?
S12
YES
WAP
NO
HTTP HEADER START WITH USER_AGENT DoCoMo?
S13
YES
I-mode/C-HTML
NO
HTTP HEADER START WITH USER_AGENT PDXGW?
S14
YES
Pmail DX
NO
ASSUMING AS PC/PDA, STORE USER_ AGENT FOR DETAILED CLASSIFICATION
S15
COMPLETE

118US

FIG.10

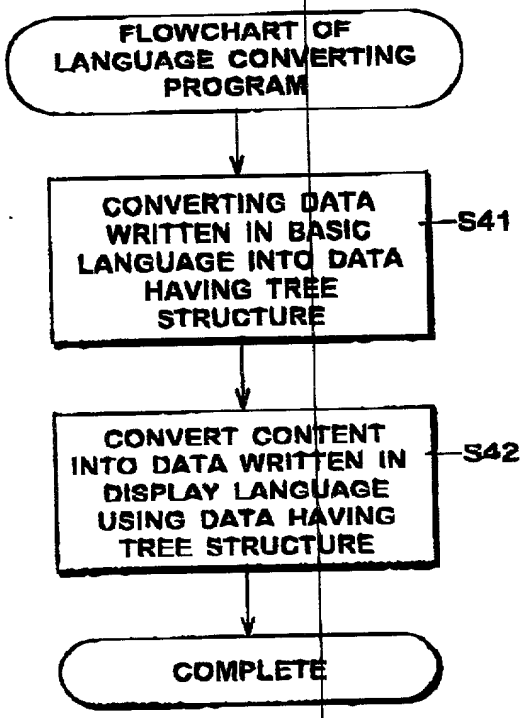

FLOWCHART OF LANGUAGE CONVERTING PROGRAM
CONVERTING DATA WRITTEN IN BASIC LANGUAGE INTO DATA HAVING TREE STRUCTURE
S41
CONVERT CONTENT INTO DATA WRITTEN IN DISPLAY LANGUAGE USING DATA HAVING TREE STRUCTURE
S42
COMPLETE

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FIG.11

TAG NUMBER	
TAG TYPE	
NUMBER OF ATTRIBUTES	
ATTRIBUTE NAME-1	ATTRIBUTE VALUE-1
ATTRIBUTE NAME-2	ATTRIBUTE VALUE-2
ATTRIBUTE NAME-3	ATTRIBUTE VALUE-3
. . .	. . .
TEXT (ONLY A-TAG, P-TAG)	
SUBSEQUENT TAG NUMBER	
TAG NUMBER FOR CHILD TAG(ONLY KSP,FORM,SELECT TAG)	

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FIG.12

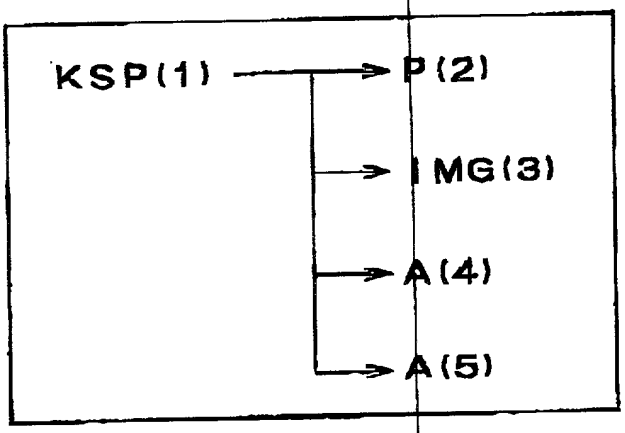

FIG.13

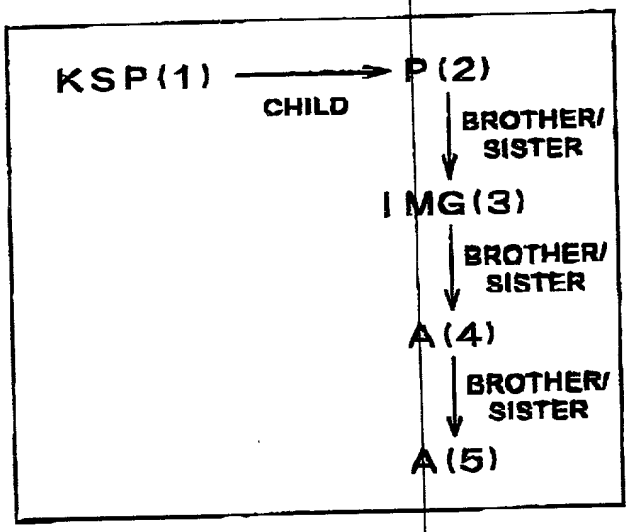
KSP(1)
CHILD
P(2)
BROTHER/ SISTER
IMG(3)
BROTHER/ SISTER
A(4)
BROTHER/ SISTER
A(5)

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FIG.14

TAG NUMBER	1
TAG TYPE	KSP
NUMBER OF ATTRIBUTES	2
ATTRIBUTE NAME-1	KEY
ATTRIBUTE VALUE-1	K1
ATTRIBUTE NAME-2	NAME
ATTRIBUTE VALUE-2	KSPSAMPLE
TEXT	(EMPTY)
SUBSEQUENT TAG NUMBER	0(NO CORRESPONDING TAG)
TAG NUMBER FOR CHILD TAG	2

TAG NUMBER	2
TAG TYPE	P
NUMBER OF ATTRIBUTES	1
ATTRIBUTE NAME-1	KEY
ATTRIBUTE VALUE-1	R1
TEXT	SELECT THE MENU
SUBSEQUENT TAG NUMBER	3
TAG NUMBER FOR CHILD TAG	0(NO CORRESPONDING TAG)

TAG NUMBER	3
TAG TYPE	IMG
NUMBER OF ATTRIBUTES	2
ATTRIBUTE NAME-1	KEY
ATTRIBUTE VALUE-1	R2
ATTRIBUTE NAME-2	SRC
ATTRIBUTE VALUE-2	ICON. JPG
TEXT	(NONE)
SUBSEQUENT TAG NUMBER	4
TAG NUMBER FOR CHILD TAG	0(NO CORRESPONDING TAG)

TAG NUMBER	4
TAG TYPE	A
NUMBER OF ATTRIBUTES	2
ATTRIBUTE NAME-1	KEY
ATTRIBUTE VALUE-1	R3
ATTRIBUTE NAME-2	HREF
ATTRIBUTE VALUE-2	MAIL. KSP
TEXT	MAIL
SUBSEQUENT TAG NUMBER	5
TAG NUMBER FOR CHILD TAG	0(NO CORRESPONDING TAG)

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FIG.15

TAG NUMBER	5
TAG TYPE	A
NUMBER OF ATTRIBUTES	2
ATTRIBUTE NAME-1	KEY
ATTRIBUTE VALUE-1	R4
ATTRIBUTE NAME-2	HREF
ATTRIBUTE VALUE-2	BBS. KSP
TEXT	BBS
SUBSEQUENT TAG NUMBER	0(NO CORRESPONDING TAG)
TAG NUMBER FOR CHILD TAG	0(NO CORRESPONDING TAG)

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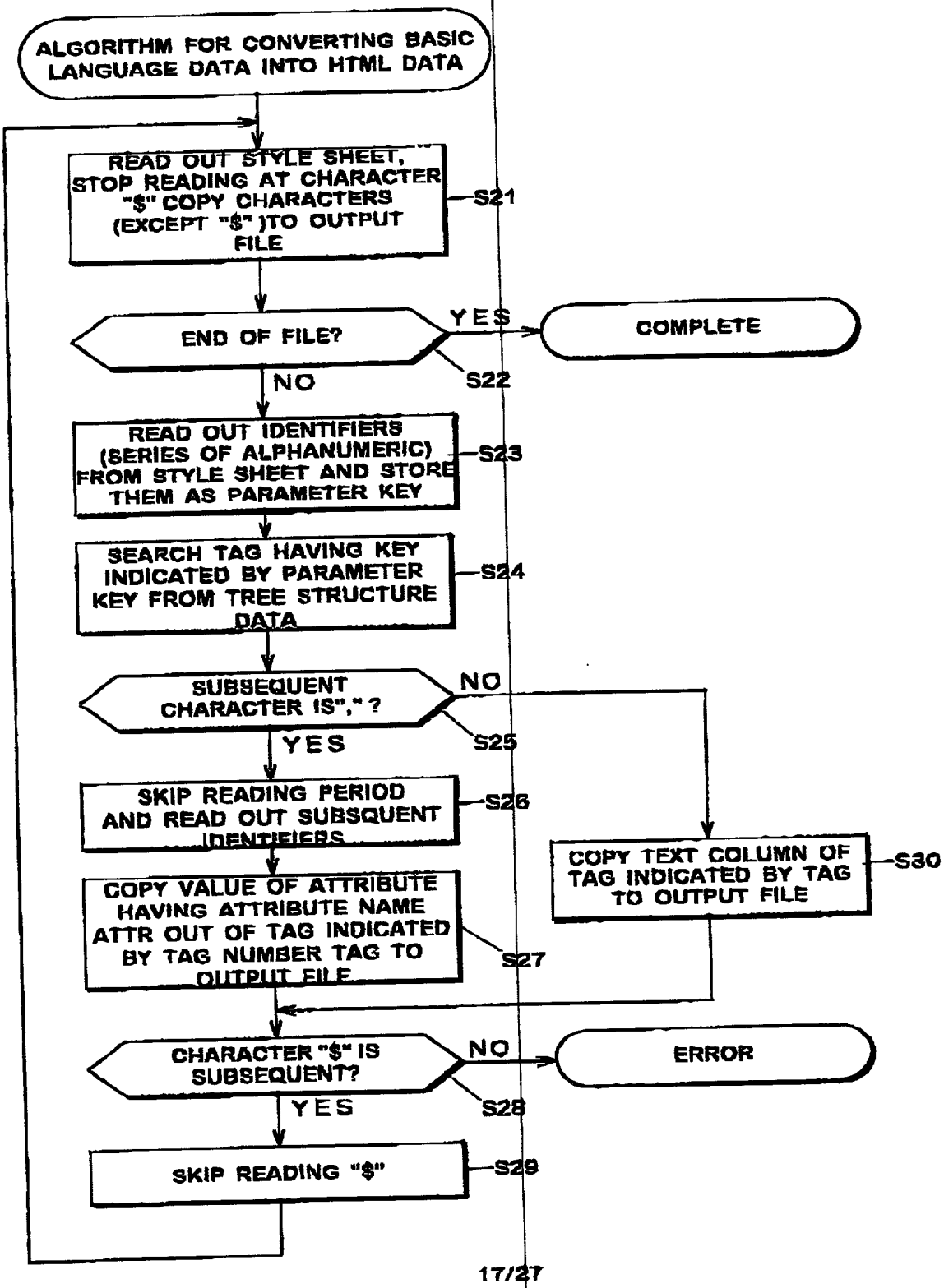
FIG.16


ALGORITHM FOR CONVERTING BASIC LANGUAGE DATA INTO HTML DATA
READ OUT STYLE SHEET, STOP READING AT CHARACTER "$" COPY CHARACTERS (EXCEPT "$")TO OUTPUT FILE
S21
END OF FILE?
YES
COMPLETE
S22
NO
READ OUT IDENTIFIERS (SERIES OF ALPHANUMERIC) FROM STYLE SHEET AND STORE THEM AS PARAMETER KEY
S23
SEARCH TAG HAVING KEY INDICATED BY PARAMETER KEY FROM TREE STRUCTURE DATA
S24
SUBSEQUENT CHARACTER IS"," ?
NO
S25
YES
SKIP READING PERIOD AND READ OUT SUBSQUENT IDENTIFIERS
S26
COPY TEXT COLUMN OF TAG INDICATED BY TAG TO OUTPUT FILE
S30
COPY VALUE OF ATTRIBUTE HAVING ATTRIBUTE NAME ATTR OUT OF TAG INDICATED BY TAG NUMBER TAG TO OUTPUT FILE
S27
CHARACTER "$" IS SUBSEQUENT?
NO
ERROR
S28
YES
SKIP READING "$"
S29

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```
<HTML>
<HEAD><TITLE>KSP SAMPLE</TITLE></HEAD>
<BODY BACKGROUND=bg.gif>
SELECT THE MENU <BR>
<IMG SRC=ICOM.JPG>
<A HREF=MAIL.KSP> MAIL </A>
<A HREF=BBS.KSP> BBS </A>
</BODY>
</HTML>
```

FIG.17

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FIG.18

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FIG.19A

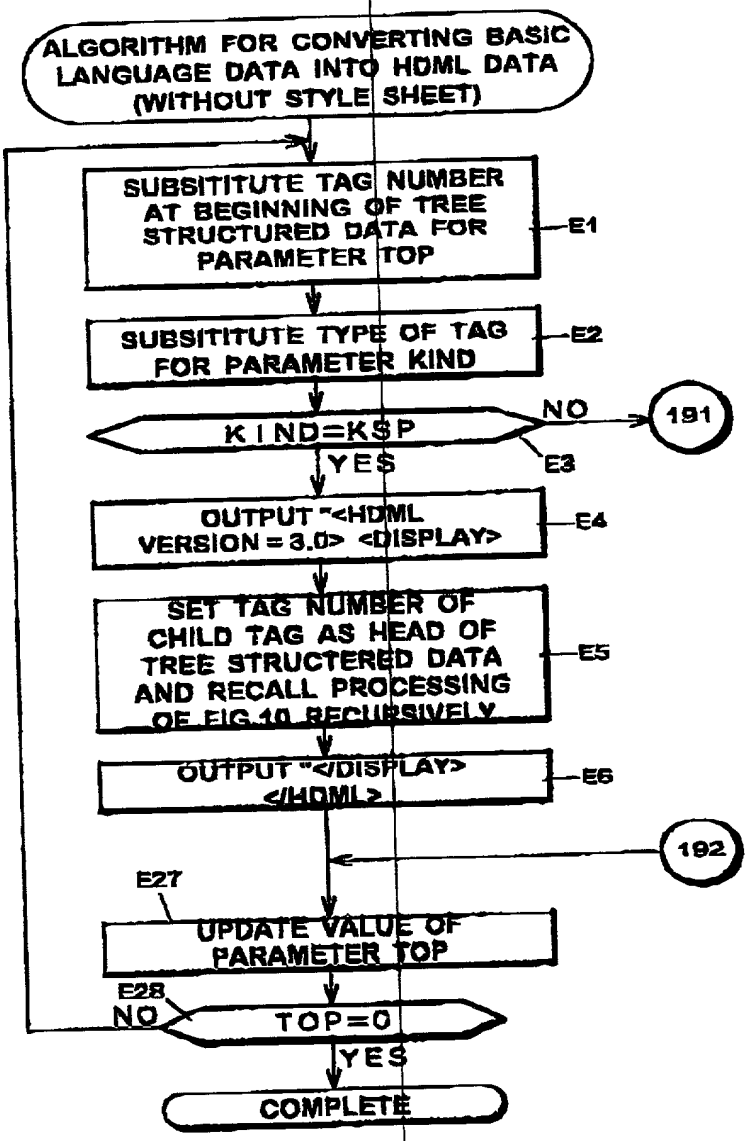

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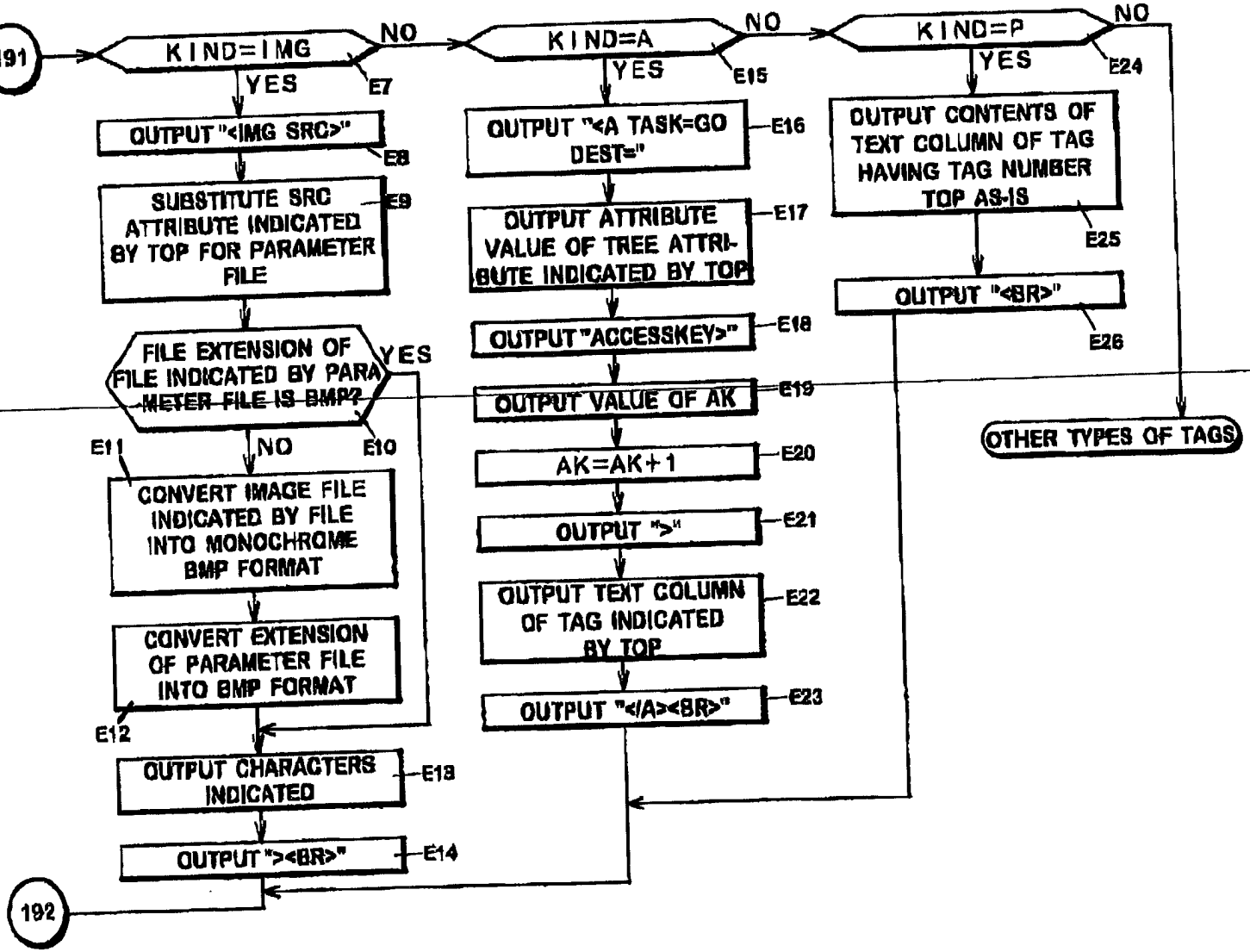
FIG.19B



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```
<HTML VERSION=3.0>
<DISPLAY>
SELECT THE MENU <BR>
<IMG SRC=ICOM.BMP><BR>
<A TASK=GO DEST=MAIL.KSP ACCESSKEY=1 >MAIL </A><BR>
<A TASK=GO DEST=BBS.KSP ACCESSKEY=2>BBS </A><BR>
</DISPLAY>
</HTML>
```

FIG.20

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FIG.21

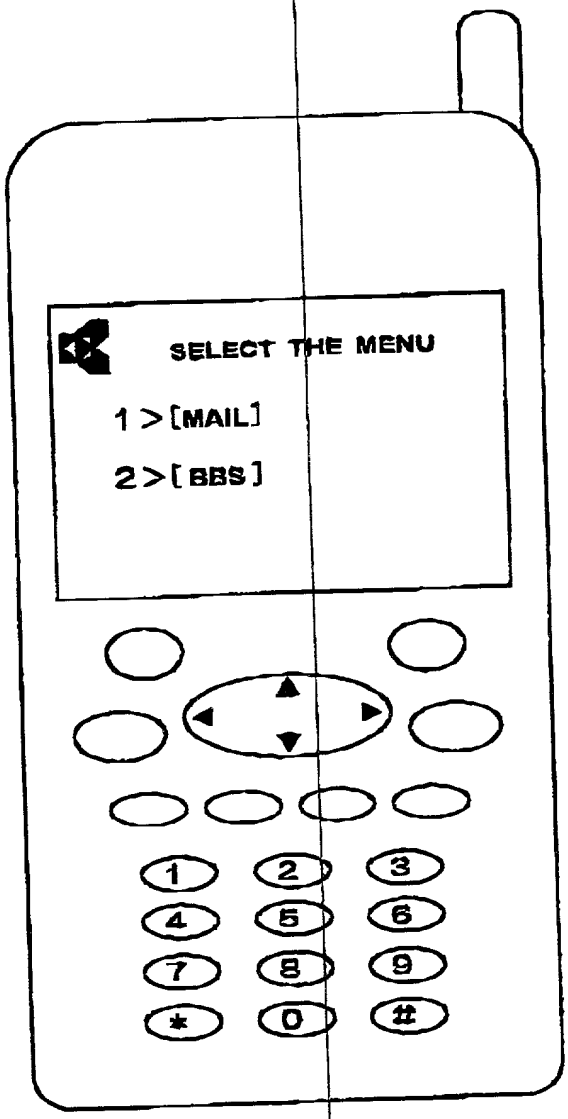

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FIG.22

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140
CONVERSION PROGRAM
(DISPLAY LANGUAGE → BASIC LANGUAGE)
130
CONVERSION PROGRAM
(BASIC LANGUAGE → DISPLAY LANGUAGE)
12

FIG.23

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FIG.24

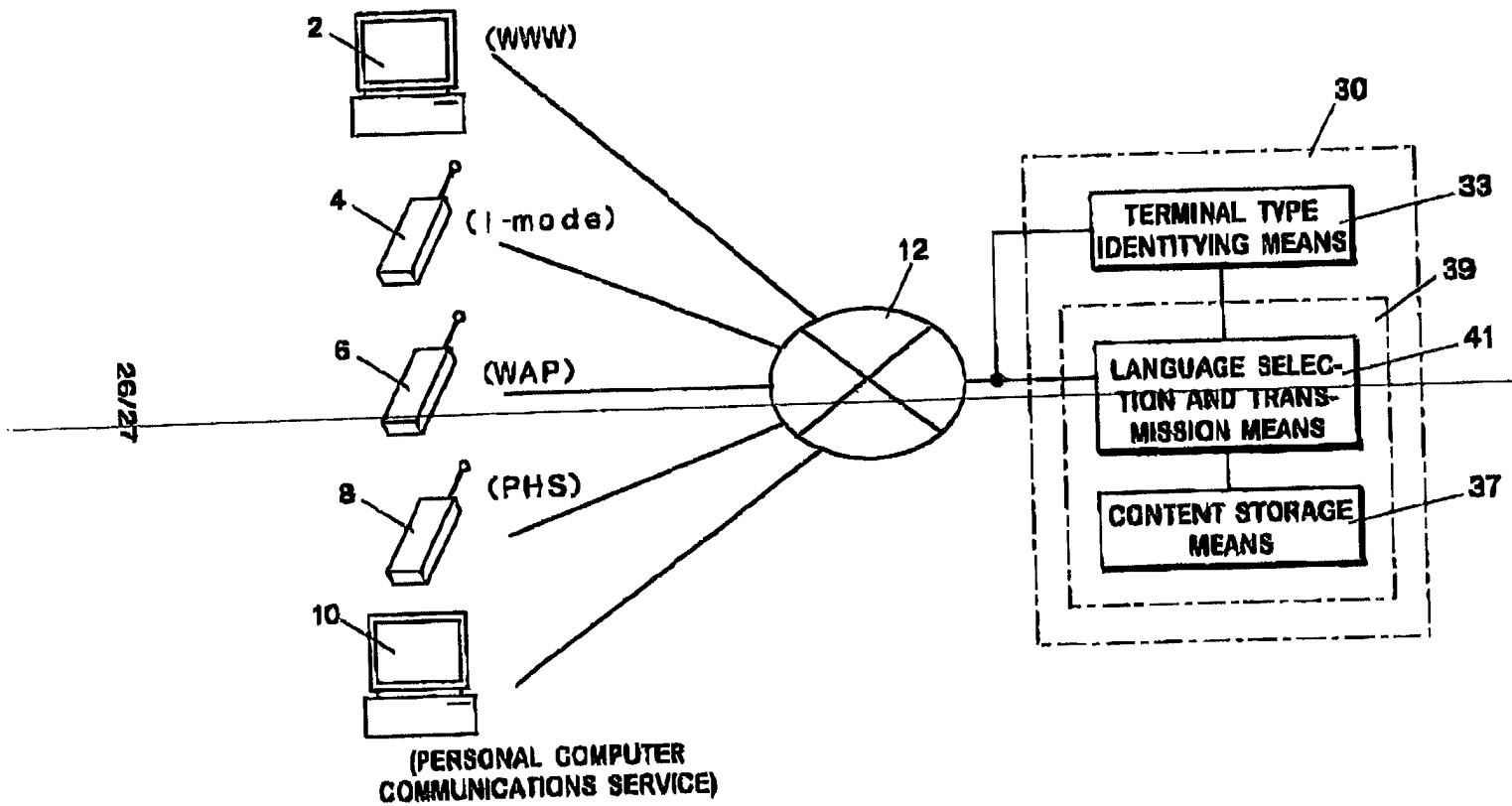

FIG.25

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